

REMARKS

Claims 1-12, 15-16, 24 and 26-29 were examined. In the present Response, a clarifying amendment to Claim 1 was made, which does not narrow the scope of the claims and is not being made for reasons relating to patentability. New Claim 73 is currently being presented. No new matter has been added, no claims were cancelled, and no claims were withdrawn. After entry of this Amendment, Claims 1-12, 15-16, 24, 26-29 and 73 will be pending in the application.

REJECTIONS UNDER 35 U.S.C. §112, SECOND PARAGRAPH

Claims 1-12, 15-16, 24 and 26-29 were rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention.

In the Office Action, the Patent Office stated that the recited elements in independent Claim 1 are not linked in a meaningful manner as to result in a “system.” Specifically, the Patent Office stated that the ionized gas mixer and injector are not located with respect to the collection device or any other structure, and that the dissolved air flotation unit is not located with respect to any other element.

In response, Applicants have amended Claim 1 solely for the purposes of clarification to recite that “the at least one mixer” is “fluidly connected to and disposed downstream of the at least one disinfectant generator” and that the “at least one dissolved air flotation unit” is “fluidly connected to and disposed downstream of the ionized gas mixer.” In view of the foregoing amendments to Claim 1, Applicants state that the location of the ionized gas injector is now clear, because Claim 1 also recites that the ionized gas injector is coupled to the at least one mixer.

Withdrawal of the rejection under 35 U.S.C. §112(2) is respectfully requested.

REJECTION UNDER 35 U.S.C. §103(a)

Claims 1-3, 7, 12, 15-16, 24 and 26-29 were rejected as being obvious over U.S. Patent Publication No. 2001/0020603 to Moorehead in view of U.S. Patent No. 3767046 to Hartkom.

Applicants respectfully traverse the rejection.

As an initial matter, the Patent Office's conclusion that it would have been obvious to operate the system of Moorehead as in Hartkorn would have been obvious to one of ordinary skill, ignores the fact that the pending claims are directed to a system for treating wastewater, not a method for operating the system. The method claims were withdrawn from consideration in response to the Office's Restriction Requirement.

Moorehead is deficient because it fails to teach or suggest a system that includes a disinfectant injector, as claimed in Claim 1. In fact, Moorehead states that an object of the invention is "to minimize or eliminate the use of chemicals and toxins in a pre-filtration system." (Moorehead, ¶25). Instead, Moorehead teaches a pre-filtration apparatus that includes an oxygen saturator (31) in which excess dissolved gases are absorbed into ionized water to create a high pressure oxygen mixture ("HPOM"). The HPOM stream ("X") at a first pressure P_1 and raw wastewater influent at a second pressure P_2 , less than the pressure P_1 of the HPOM, are mixed together in a blender (51). In the blender (51), the pressure differential between the ionized HPOM and wastewater causes the creation of "white water." The whitewater process stream ("WWP") is discharged into a hydrocyclone separator (71), which separates the WWP into a decontaminated water stream ("DCW"), a wastewater stream, and heavier particles that are removed via a sump pump and drain. Moorehead completely fails to address the issue of disinfecting wastewater, other than to state that it is undesirable. Moorehead fails to teach or suggest a disinfectant injector, as claimed in Claim 1.

Hartkorn teaches an electrolytic method of agglomerating particles. Hartkorn states that the method provides improved efficiency because it is operated in batches, rather than continuously. Hartkorn states that "chloride, for instance sodium chloride, may be added to the liquid to increase its conductivity and, furthermore, to produce chlorine during the electrolysis, which works as a disinfectant." (Hartkorn, Col. 9, ll. 50-53). Despite Hartkorn's teaching that sodium chloride may be added to the liquid, it is completely silent with regard to how the disinfectant is to be added to the liquid. Hartkorn is deficient because it fails to teach or suggest a system that includes a disinfectant injector, as claimed in Claim 1. Moorehead and Hartkorn, alone or in combination, fail to

disclose, teach or suggest a water treatment system comprising a disinfectant injector, as claimed in Claim 1.

Moreover, Moorehead and Hartkorn, alone or in combination, fail to provide any motivation for including such a disinfectant injector. Even one of ordinary skill in the art at the time of the invention were motivated to combine Moorehead with Hartkorn, the resulting combination is deficient because it would not include the claimed feature of the disinfectant injector.

Moorehead and Hartkorn, alone or in combination, fail to disclose, teach or suggest the presently claimed invention. Independent Claim 1 is therefore patentable over Moorehead and Hartkorn, alone or in combination, and the claims that depend therefrom directly or indirectly are patentable for at least the same reasons.

Withdrawal of the rejection is respectfully requested

NEW CLAIMS

New Claim 73 has been added to further define Applicants contribution to the art, and not for purposes of patentability with respect to the cited prior art references. New Claim 73 includes all of the limitations found in existing Claims 1 and 2. Therefore, the Patent Office should have searched all limitations found in new Claim 73 and the additional searching should not be required. Consequently, new Claim 73 is believed patentable for at least the same reasons set forth above.

CONCLUSION

In view of the amendments and remarks, it is believed that all claims are in condition for allowance, and it is respectfully requested that the application be passed to issue. The Examining Attorney is requested to call the undersigned at the number below if there are any questions or outstanding issues regarding this application. Please charge any deficiency or credit any overpayment in the fees that may be due in this matter to Deposit Account No. 50-1935.

Respectfully submitted,
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